

What Is Claimed Is:

1. An electroluminescent device comprising:
a substrate;
a lower electrode layer over the substrate, having a plurality of convex shapes in its surface;
an insulating layer over the lower electrode layer;
a light-emitting layer over the insulating layer;
an upper electrode layer over the light-emitting layer; and
a passivation layer over the upper electrode layer,
wherein the insulating layer, the light-emitting layer, and the upper electrode layer are formed in succession.
2. The electroluminescent device according to claim 1, wherein the lower electrode layer has a layered structure including a polysilicon layer and a metal layer.
3. The electroluminescent device according to claim 2, wherein the polysilicon layer has a plurality of convex shapes in its surface.
4. The electroluminescent device according to claim 2, wherein the metal layer includes at least one of Al and Ag.

5. The electroluminescent device according to claim 1, wherein the lower electrode layer has a layered structure including a tungsten layer and a metal layer.

6. The electroluminescent device according to claim 5, wherein the tungsten layer has a plurality of convex shapes in its surface.

7. The electroluminescent device according to claim 5, wherein the metal layer includes at least one of Al and Ag.

8. The electroluminescent device according to claim 1, wherein the insulating layer, the light-emitting layer, and the upper electrode layer have substantially the same surface profile as the lower electrode layer.

9. The electroluminescent device according to claim 1, wherein the lower electrode layer has a single layer structure of a metal layer.

10. The electroluminescent device according to claim 9, wherein the metal layer includes at least one of Al and Ag.

11. The electroluminescent device according to claim 1, wherein the insulating layer includes BaTiO_3 .

12. The electroluminescent device according to claim 1, wherein the upper electrode layer includes indium tin oxide (ITO).

13. The electroluminescent device according to claim 1, wherein the light-emitting layer includes ZnS doped with at least one of Cu and Mn.

14. A method for manufacturing an electroluminescent device, the method comprising:

forming, over a substrate, a lower electrode layer having a plurality of convex shapes in its surface;

forming, over the lower electrode layer, an insulating layer, a light-emitting layer, and an upper electrode layer in succession so that the insulating layer, the light-emitting layer, and the upper electrode layer have substantially the same surface profile as the lower electrode layer; and

forming a passivation layer over the upper electrode layer.

15. The method according to claim 14, wherein forming the lower electrode layer includes:

forming, over the substrate, a polysilicon layer having a plurality of convex shapes in its surface; and

forming, over the polysilicon layer, a metal layer having substantially the same surface profile as the polysilicon layer.

16. The method according to claim 15, wherein the polysilicon layer is formed by low pressure chemical vapor deposition (LPCVD) at a temperature between about 560°C and about 610°C.

17. The method according to claim 14, wherein forming the lower electrode layer includes:

forming, over the substrate, a tungsten layer having a plurality of convex shapes in its surface; and

forming, over the tungsten layer, a metal layer having substantially the same surface profile as the tungsten layer.

18. The method according to claim 17, wherein the tungsten layer is formed by chemical vapor deposition (CVD).

19. The method according to claim 14, wherein forming the lower electrode layer includes:

forming a metal layer over the substrate; and

etching a surface of the metal layer to form a plurality of convex shapes thereon.

20. The method according to claim 19, wherein the metal layer is formed by thermal deposition.

21. The method according to claim 19, wherein etching the surface of the metal layer includes performing at least one of wet etching and dry etching.

22. The method according to claim 14, wherein forming the insulating layer includes forming a BaTiO₃ based material.

23. The method according to claim 14, wherein forming the light-emitting layer includes performing at least one of electron beam deposition and sputtering.

24. The method according to claim 14, wherein forming the upper electrode layer includes;

forming an indium tin oxide (ITO) layer; and

patterning the indium thin oxide layer.

25. An electroluminescent device comprising:

a substrate;

a lower electrode layer over the substrate, having an uneven surface profile;

an insulating layer over the lower electrode layer, having an uneven surface profile substantially corresponding to the uneven surface profile of the lower electrode layer;

a light-emitting layer over the insulating layer, having an uneven surface profile substantially corresponding to the uneven surface profile of the insulating layer; and

an upper electrode layer over the light-emitting layer, having an uneven surface profile substantially corresponding to the uneven surface profile of the light-emitting layer.

26. The electroluminescent device according to claim 1, wherein the uneven surface profile of the lower electrode has a plurality of convex shapes each of which is substantially hemispheric.